DOCUMENT RESUME

ED 333 077 UD 028 100

AUTHOR Ilola, Lisa Marie
TITLE The Use of Structured Social Interaction with the Culture-General Assimilator To Increase Cognitive Problem Solving about Intercultural Interactions in an Ethnically Diverse Population.
PUB DATE 3 Apr 91
NOTE 30p.; Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, IL, April 3, 1991).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Cooperative Learning; Critical Incidents Method; *Cross Cultural Training; Cultural Differences; Elementary Secondary Education; *Teacher Education
IDENTIFIERS Culture Assimilator

ABSTRACT

This study describes an intercultural learning program combining cooperative learning with critical incidents drawn from the culture-general assimilator developed by Brislin. The training program was adapted to school teachers, a population already identified as a high-risk group because of the frequency and unpredictability of the intercultural interactions likely to occur in schools. Moreover, teachers are agents of the socialization process for young people. The 91 participants in the study, all university students, were required to engage in triad group work as they discussed hypothetical incidents illustrating cultural conflict around themes such as individualism versus collectivism. Each member of the triad played a specific role, switching roles with each new problem. The summarizer rephrased the material in his or her own words. The elaborator provided additional, related material. The monitor made sure that the summary and elaboration were accurate. Compared to a control group that participated in unrelated activities, training significantly increased participants' ability to recognize and analyze intercultural conflict in their own lives and to select correct responses and provide accurate analyses for posttest problems. The control group engaged in training later and training effects were replicated. An 8-week follow-up demonstrated retention of learning. Participants also rated training as interesting, beneficial, and enjoyable. Five tables, two appendixes, and a list of 30 references are included. (CJS)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED333077

The Use of Structured Social Interaction With the Culture-General Assimilator to Increase Cognitive Problem Solving About Intercultural Interactions in an Ethnically Diverse Population

Lisa Marie Ilola
Division of Educational Services
University of Illinois
College of Medicine at Peoria
Peoria, Illinois 61656

Session 8.02 "Influences Within the Urban Ecology"
Division G (Social Context of Education) Roundtables
April 3, 1991

American Educational Research Association
Chicago

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

L. Ilola
U. of IL at Peoria

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Acknowledgements: The invaluable contributions of Richard W. Brislin (East-West Center), David Sherrill (University of Hawai'i at Manoa), and Mary Note (UCLA) are acknowledged.

UD 028 /00

BEST COPY AVAILABLE

Abstract

Contributions from cooperative learning and intercultural training are integrated in this study. Cooperative learning approaches are those in which the primary learning tasks occur during peer interaction rather than through direct teacher-student interaction. Intercultural training using the culture assimilator can be culture-specific or culture-general; both are designed to increase trainees' ability to make culturally appropriate interpretations of intercultural situations and behaviors.

The training program in this study was designed for school teachers, a population identified as a "high risk group" because of the frequency and unpredictability of the intercultural interactions that occur in schools. Culture-general assimilator materials were used in combination with triadic cooperative learning. Members of triads helped each other learn the assigned material by engaging in specific roles. The **summarizer** concisely rephrased the material in his or her own words. The **elaborator** was the "teacher" and thus provided additional information which related to the material. The **monitor** made sure that the summary and elaboration was accurate, and that the group stayed on task. Members of the triad exchanged roles for each new problem so that all had the opportunity to engage in each role at least once every session.

Compared to a control group who participated in unrelated activities, training significantly increased participants' ability to recognize and analyze intercultural conflict in their own lives and to select correct responses and provide accurate analyses to posttest problems. The control group engaged in training later, and training effects were replicated with them. An eight-week follow-up with the first group demonstrated retention of training effects. Moreover, participants rated training as interesting, beneficial, enjoyable, and as something they would be likely to use in the future. These results were independent of social desirability factors.

Cooperative Learning and Intercultural Interactions

Cooperative learning, also known as structured group learning, is one of many approaches used to foster intercultural learning and positive intercultural interactions. It has also been used to promote academic achievement in a variety of classroom settings. A common element in various cooperative learning approaches is that the primary learning tasks occur during peer interaction rather than through direct teacher-student interaction. In the type of cooperative learning known as the Jigsaw technique for example, a group might be assigned a group project about World War II. The task would be divided up among group members and each would contribute a unique portion of information to the completion of the project. One member may focus on economic factors leading to the war; another could focus on some pertinent historical factors; the third person might review Hitler's rise to power; and the fourth might provide an outline

of the agenda of key countries involved in the war. They would teach each other what they had learned and thus, each person's contribution is as essential to the whole picture as is each piece to the completion of a jigsaw puzzle (see Aronson, 1978 for a book-length description of the Jigsaw technique).

All the reasons for cooperative learning resulting in increased academic achievement, gains in measures of self-esteem, and improved interethnic relations that are documented are not yet fully understood. The contact hypothesis predicts improved intercultural relations through personal contact with members of different ethnic groups (Amir, 1969). It is clear that just any type of interaction among members of different cultural and racial groups does not automatically decrease prejudice or improve intercultural relations, as evidenced in South Africa, among other places.

The type of interaction that appears most beneficial is equal status contact between members of majority and minority groups, in the pursuit of superordinate goals (Allport, 1954). Equal status contact means that the contribution of each member is solicited and that there is equal access to rewards. Group interdependence and individual accountability are maximized when the goals and rewards are ones that are accepted and valued by all the members of the group. In the Jigsaw assignment described earlier, it is more likely that students will strive to perform well themselves and do whatever is necessary to help weaker group members if the grade they receive for the assignment is the average of the sum of group members' scores. Their ability to use their peers as learning resources increases and students learn important social skills that enable them to develop and maintain more positive peer relationships in general (Johnson, 1981; Slavin, 1985; Johnson, Johnson, & Stanne, 1986). Minority and socially isolated students receive reinforcement and evidence that they are viable and valuable group members. The results of this can be seen in increases in measures of self-esteem and self-efficacy and decreases in intrapsychological prejudice (Aronson & Osherow, 1980; Slavin, 1980; Sharan, 1980; Lew, Mesch, Johnson, & Johnson, 1986). Interpersonal prejudices deteriorate as students work together and have positive experiences with culturally and racially different others.

Changes in behavioral and social interaction patterns accompany these attitudinal changes. In a junior-high school in Israel, Shachar and Sharan (1988), for example, found greater verbal and social interaction between Middle-Eastern and Western pupils in classes using a cooperative learning approach compared to classes using the traditional whole-class and teacher-fronted method. These patterns have also been found to extend beyond the classroom, carrying over into later life. Schwarzwald and Amir (1988) found that early desegregation experiences in schools improved interactions among soldiers in the military. The soldiers with such experiences during childhood or adolescence displayed more tolerance for members of other ethnic groups as young adults than did those without them.

Attribution Training and Intercultural Interactions

Another technique that has been used to improve intercultural attitudes and interactions is attribution training using the culture assimilator (also called the culture sensitizer) approach. The term "subjective culture" refers to people's attitudes, values, and norms of behavior, while objective culture refers to the concrete and visible products that people in a certain culture make, e.g., artifacts, clothes, or books (Triandis, 1972). Because objective culture (e.g., food preferences) is tangible, people more readily recognize that such conflicts relate to cultural differences. When problems stem from differences in subjective culture however (e.g., values), they are often more difficult to recognize.

Attribution training is designed to teach trainees to do just this, to recognize misunderstandings involving subjective culture. This involves developing the ability to make interpretations of situations that are the same as, or "isomorphic" to, a culturally different other's (Triandis, 1977). Making isomorphic attributions will enable one to have culturally appropriate cognitive, affective, and behavioral responses to culturally embedded practices. For instance, American visitors to Finland often feel awkward and uncomfortable when they discover that they are expected to take all their clothes off (and not drape themselves with a towel or wear a bathing suit) when invited to take a sauna with their Finnish hosts. Their affective discomfort is increased by the sheer physical discomfort of the high heat, humidity, and well-meaning thrashings by their host with a hot bundle of birch boughs (the latter of which Finns insist feels good and is healthful because it invigorates the circulation). When invited to roll naked in the snow or jump in a hole in the ice afterwards, even the most culturally sensitive visitor to Finland may feel they have had enough.

To feel comfortable in this or any other situation that feels awkward because of cultural differences involves learning the criterial attributes culturally different others use to categorize the domains of self, others, objects, and behavior (Triandis, Vassiliou, Vassiliou, Tanaka, & Shanmugam, 1972). In the case of sauna bathing, this would involve gaining an appreciation of the historical and cultural importance of saunas in Finland (which, incidentally, is a Finnish word and is Finland's contribution to the English language).

This arctic country has over 30,000 lakes and much of it is surrounded by the sea. With so much accessible water, sauna cottages were usually built by a lake or the sea. They minimally consisting of an outdoor porch, an indoor dressing room, a washing room, and the sauna room itself. During the week sponge baths would suffice, but at least once a week the stone-laden saunastove would be fired up and the whole family would have a thorough cleansing in the sauna. To Finns, wearing something in the sauna would be like taking a bath with your clothes on. Naturally, people took saunas throughout the year and when the lakes and sea were frozen in the winter, rolling in the snow or dipping in a hole in the ice rinsed off the sweat and dirt and provided welcome relief from the heat. In the past, saunas were

also the place for delivering babies as it was warm and could be easily cleaned, and even today it does not have the sexual connotations that members of other cultures sometimes assume.

Clearly there are culture-specific elements to this particular incident, and the first culture assimilators were culture-specific. They prepared a member of a given culture to make the type of isomorphic attributions that enhance interactions with members of another given culture (Fiedler, Mitchell, & Triandis, 1971). Those who were preparing for sojourns abroad, foreign diplomats, business people, missionaries, and foreign exchange students, among other groups of people, studied these materials. They typically contained short vignettes like the sauna incident, called "critical incidents," each one depicting a problematic interaction between members of different cultural groups. The cause of the problem was usually due to differences in the subjective cultures of the two groups. Four or five possible alternative explanations for the problem are presented in multiple choice format from which readers may select after they have read the critical incident.

Because there are countless country-pairs, the number of culture assimilators that could be developed are innumerable. This makes them impractical as their development is expensive and time consuming. Another limitation to culture-specific training is that it is not always possible to know in advance the cultural groups with which people will interact. Military personnel travel through many countries, as do international consultants on trouble-shooting assignments. And school teachers have to teach students belonging to many different ethnic groups, without traveling to foreign countries at all. It is rare that a teacher knows the precise ethnic composition of the class more than a few weeks in advance of the beginning of the new school year, and this usually changes from year to year anyway.

The need to prepare these types of individuals prompted Brislin, Cushner, Cherrie and Yong (1986) to develop a culture-general assimilator. Like culture-specific assimilators, the culture-general assimilator uses critical incidents to illustrate reasons for cultural misunderstanding and conflict. It is designed to prepare individuals for intercultural interactions regardless of where they will occur, what a person's role in the other culture will be, and what cultural groups will interact (see Brislin, 1986, for a more detailed discussion). This collection of 100 critical incidents centers around 18 basic themes that cover a broad range of misunderstandings that can occur in intercultural interactions. Although future research will undoubtedly refine these 18 themes, they nonetheless provide a workable framework which individuals can use in understanding intercultural issues, both culture-general and culture-specific.

Empirical Research With Culture-General Assimilator Material

Research conducted by Broaddus (1986) and Cushner (1987, 1989) has demonstrated that the culture-general assimilator technique is an effective approach to intercultural training. Both of these researchers used a treatment-control, pretest-

posttest comparison design. They also used the more traditional teacher-fronted type of instructional approach in which participants listened to lectures, engaged in some group discussions led by the instructor, and read assigned critical incidents and related essays on their own.

Broaddus' sample (undergraduates enrolled in a social psychology class) studied nine critical incidents during seven one-hour-and-twenty-minute training sessions. When tested with posttest critical incidents, the treatment group performed significantly better than did non-treatment group members on the mean number of "best choices" (in multiple choice format). Slightly higher but non-significant scores were found for sophistication of analysis of a presented critical incident; ability to distinguish among the terms culture, race, and class; and, ability to generate and analyze a personal critical incident of intercultural misunderstanding. He found a significantly higher posttest score on the Empathy factor, one of five subscales on the Inventory of Cross-Cultural Sensitivity, but this finding was tentative because there were so few responses from the control group.

An international group of adolescent foreign exchange students spending a year in New Zealand were trained with an adapted version of the culture-general assimilator in Cushner's study. They engaged in four one and one-half hour sessions, covering 19 critical incidents. Trained students performed significantly better on four of six measures selected to reflect sophistication of thinking about cross-cultural interaction, interpersonal problem solving strategies, and adjustment to the host culture. When they were tested with posttest critical incidents immediately after training, they selected significantly more of the best answers (a multiple choice task). They also wrote and analyzed a personal critical incident significantly better than did members of the control group. Three months afterwards they scored significantly higher on feelings of personal control of their environment and on one of four subscales on the Culture Shock Adjustment Inventory (Juffer, 1982). Six months later they scored significantly higher on a measure of interpersonal problem solving skills that are related to social flexibility and adjustment, the Means-End Problem Solving Test. No differences were found on self- and significant others' (e.g., host parents) ratings toward objective and subjective aspects of adjustment, or on the total or subscale scores of the Inventory of Cross-Cultural Sensitivity. To summarize, Cushner found training to be particularly beneficial in developing students' cognitive and interpersonal intercultural problem-solving abilities.

The study described here (see Ilola, 1989 for a more detailed description) combined a cooperative learning approach with critical incidents drawn from the culture-general assimilator developed by Brislin et al. (1986). The training program was adapted to school teachers, a population already identified as a "high risk group" because of the frequency and unpredictability of the intercultural interactions that occur in schools (Cushner & Brislin, 1986). In addition, teachers are an important target group for such training because they are facilitators not only of academic and vocational learning, but also of the socialization

process of young people into their cultures. If the communication and interaction that take place in schools throughout the nation is to improve, then both teachers and students have to become more aware of the importance of subjective culture. The study also implements recommendations made by Broaddus and Cushner. These include: a more individualized training approach; investigation of the duration of training effects; and, the application of learning theory to increase the effectiveness of the culture-general assimilator.

In this study, structured group work was one key to the instructional design. It promoted positive interethnic interaction. It also required participants to engage in cooperative learning activities hypothesized to promote the acquisition of new information and the integration of that new information by relating it to prior intercultural knowledge and experiences (Dansereau, 1984, 1987). Another key element was use of the culture-general assimilator material, which provided the content around which group work centered. These consisted of a short vignette and an accompanying set of rationales for right and wrong answers. Each incident illustrated one (occasionally two) culture-general issue.

The focus of training and assessment for this group of teachers (although most were preservice teachers and as yet had limited teaching experience) was on intercultural interaction problems that take place in school settings.The success of this approach was measured against three criteria:

(1) effectiveness of preparing participants for future intercultural interactions as measured by solving new problems,
(2) increase in sophistication of explanations of presented (i.e., standardized and published) and personal (the participant's own) intercultural experiences, and
(3) participant enjoyment of the training approach.

Description of Sample

There were 91 participants in this study. All were university students in Hawaii (70%, female; 30%, male). They were enrolled in a required introductory educational psychology course which met twice a week for a total of 30 sessions during the Spring of 1988 (with 75 minutes of instructional time each class period). Two instructors who normally taught the course, one of whom was the researcher, combined their sections and team- taught the course for the entire semester. Participation in the study was voluntary although students were tacitly expected to participate in various activities as a regular part of course instruction. They were told that the training was designed to help them increase their understanding of cultural differences in learning styles, role expectations, and other general issues pertinent to a multicultural classroom, but that because training involved some experimental procedures, participation, or the lack thereof, would in no way affect their grade for the course.

The group was ethnically diverse. Fifty-eight percent were Japanese Americans; 15%, Caucasian; 11%, Chinese Americans; 8%,

Hawaiian or part-Hawaiian; 7%, Filipino Americans or part-Filipino; and, 1%, some other ethnicity. Students were minimally juniors in college and seventy percent were enrolled in the Bachelor of Education program; 25%, in the Professional Diploma program (a fifth year teacher certificate); 3%, in the Master of Education program; 1%, in an education-related doctoral program; and 1%, in some other program. Over half (56%) reported that their professional goal was to teach at the elementary level; 39%, at the secondary level; and 1%, at the early childhood education level. One percent were enrolled in the recreation leadership program; and 3% were undecided about future plans. The group was relatively inexperienced professionally. Only one-fourth of the group had previous teaching experience, of which 10% had up to 1 year experience and 4%, 5 years or more. The prototypical participant in this study then, was a Japanese American female enrolled in the B.Ed. program, who had very little or no previous formal teaching experience and who intended to teach elementary grades.

Design

An experimental control-group design was selected (Table 1). It allowed the testing, replication, and an examination of the duration of treatment effects. Personal critical incidents were collected as a pretraining measure from all participants three weeks before training began. A posttest battery (containing three parts--15 new critical incidents, a 7-item matching-terms-to-definitions task, and four Likert-scales assessing attitude toward the training), the Inventory of Cross-Cultural Sensitivity, and a social desirability scale were administered to all participants at the same time, five days after the treatment group completed the training.

Six weeks afterwards, the control group was trained to see if initial findings would be replicated. Eight weeks after the first group was trained and five days after the second group was trained, a final posttest battery (containing three parts--15 new critical incidents, the same 7-item matching-terms-to-definitions task, and the same four Likert-scales assessing attitude toward training) was administered to all participants at the same time. Post-training personal critical incidents were collected from members of both groups during the final ten minutes of the third of their respective training sessions. Demographic data were collected from participants at the beginning of the semester.

INSERT TABLE 1 ABOUT HERE

There are a number of benefits to this type of design, sometimes called "wait control," because the control group at the beginning "waits" and later receives the training. There is less of an ethical problem because no one wanting or potentially benefiting from training is denied it. Thus, the needs of both the researcher and the sponsoring organization that allows the

presence of the researcher are satisfied; the research is methodologically sound and all participants eventually receive the training.

Research cited earlier supporting the value of group heterogeneity and personal intercultural contact influenced the decision to use the following as stratifying variables: ethnicity, sex, degree program status (B.Ed., P.D., M.Ed., Ph.D.), and desired teaching level (elementary, secondary, college, or other), before randomly assigning participants to either Group A or B. Participants, then, were first randomly assigned to six-member groups with the restriction of approximate balance for sex, ethnicity, degree program status, and intended teaching level. After that, these six-member groups (one group had seven) were randomly assigned to Group A (n=43) or Group B (n=48). This arrangement met the dual needs of the research and other class activities that were unrelated to training.

Members of Group A were trained first. Six weeks after acting as a control group for Group A, members of Group B were also trained. While one group was trained, the other group engaged in standard course content (educational psychology), unrelated to training however, for the same amount of time with the other instructor. They also worked in small groups but not in the role-structured fashion used in training. Members of both Group A and Group B were further randomly assigned to different triads for each of the three one-hour-and-15 minute training sessions. All participants were informed that they would engage in the exact same training, but only at different times in the semester. Members of Group A were asked not to discuss their training with members of Group B until after they too had completed their training.

During the first session, students received and reviewed with the researcher a list of each sessions' randomly formed triads; a copy of a literature review on cooperative learning; and a script defining the roles of summarizer, elaborator, and monitor. Each of the three sessions was conducted in the same way; five minutes of triadic role-structured study, five minutes of less structured review of the answer to the incident, and five minutes of instructor-lead review. The **summarizer** concisely rephrased the critical incident in his or her own words. The **elaborator** was the "teacher" and provided an explanation, illustration, or related a personal incident similar to the one under study. The **monitor** made sure that the summary and elaboration were correct, provided another elaboration if time permitted, and made sure that the triad stayed on task. Further discussion of these roles is provided by Dansereau (1984, 1987). Members of triads took turns so that each person engaged in all the roles at least once during each session.

After five minutes, the researcher flicked the lights (the agreed upon transition signal), indicating that there was one minute left to choose one of the alternative explanations for the incident, before opening the packet containing the rationales for the explanations. Triads had another five minutes to read and discuss the answer card which contained rationales for right and wrong answers.

After students had chosen their answers (it was not necessary that the triad agree on a single answer), and read and discussed the rationales, the researcher reviewed the critical incident and the underlying culture-general issue with the entire class. Elaborations which triads had found to be particularly helpful were also solicited. The main culture-general issue was emphasized but also secondary issues were identified when relevant. For example, categorization and stereotyping are underlying processes involved in prejudice and ethnocentrism (critical incident number 41, see Table 2).

One problem with this type of learning activity is that misconceptions may become elaborated and learned. The instructor-lead review of each incident was intended to limit the likelihood of this occurring. During group work, the instructor also walked from triad to triad to monitor group interaction, to ensure that triads understood what they were to do, and to intervene only if absolutely necessary.

All work was done during class time; no homework or outside reading was assigned during any of the sessions. Students who missed a class were given the packet used that session to read on their own, if they wanted to. There was no penalty for missing sessions or failing to participate in any of the activities. No external reward or reinforcement for participating in the study was offered, other than the obvious one of learning more about issues in multicultural education as well as cooperative learning techniques that they could someday use with their own students. Twelve of the incidents in Brislin et al. (1986) were used during training, leaving 88 which students could have read on their own if they wished.

Example of a Typical Triadic Interaction

The first culture-general theme, the concept of individualism versus collectivism, was introduced to students through "A Packed Lunch". It is reviewed here with a description of the training procedure. Students began by reading the incident.

A Packed Lunch

An American family living in Japan for one year wanted their son (age 10) to attend a Japanese elementary school. When they so indicated to their landlord, he sent his English-speaking daughter to act as a go-between (chukaisha). The boy was duly enrolled and began school. He had to take a lunch (bento) every day, so he took a regular American meal of sandwich, chips, cookies, and drink. The teacher subsequently contacted the go-between to have her talk with the parents about the inappropriateness of the lunch and to request the parents provide a more Japanese-style bento. Why was the school teacher perturbed by the child's American-style lunch?

(1) The teacher feared that the Japanese children would become dissatisfied with their own lunches.
(2) It was felt the lunch was not sufficiently nutritious.
(3) The typical Japanese bento has symbolic significance, and it was felt that the child was breaking with tradition.
(4) Conformity in Japanese society is valued more than individuality. (Brislin et al. 1986, 58-59)

After the group had read the incident, the **summarizer** (without looking at the card containing the incident) might have said something like, "Basically, what happened is that this American family moved to Japan and they wanted their 10-year old son to attend a Japanese elementary school. The landlord's daughter spoke English, so she went to the school and set things up. Everything was working out all right, but then the teacher complained about the boy's American-style lunch. She wanted him to have the same kind of Japanese-style lunch that everyone else had."

The **elaborator** might have followed with, "This reminds me of something that happened to me, only my experience didn't involve a different culture. When I was in fifth grade there was this new girl who joined our class in the middle of the year. Her clothes looked like hand-me-downs and I think her family was kind of poor. I remember that when we ate in the cafeteria, she always had this really measly lunch, like only one peanut-butter sandwich on white bread and no dessert or drink or fruit or anything else. A couple of guys used to tease her and call her "Orphan Annie" but I felt sorry for her because me and all my friends always sat together and had nice hot cafeteria lunches. If I were her teacher, I would've contacted her parents and told them to let her get a lunch like everyone else."

The **monitor** could have concluded with a comment such as, "Yeah, I think you're right and that one of the issues here is the awkwardness of being different from everyone else. But I think the real issue here is the way Japanese conform to group norms. It's so easy to pick out the Japanese tourists in Waikiki because they all dress alike and tour Hawaii in charter buses in groups. I've even seen Japanese couples on their honeymoon by the bus load! I'm a second generation Japanese American, and I don't think it's as important to my generation, but you should see the way my parents and grandparents behave! There's this Japanese saying that my obachan, my grandma, always says to me when she thinks I'm doing something that is not very conventional. She says, 'The nail that sticks up gets pounded down.'"

The lights in the classroom were flicked when there was one minute of triadic role-based interaction remaining. If they had not already done so, they would then choose an answer. They then opened the packet containing the rationales and read and discussed them.

A Packed Lunch: Rationales for the Alternative Explanations

(1) You selected 1. This is possible, but it was probably not uppermost in the teacher's mind. Please choose again.
(2) You selected 2. It probably is less nutritious, but there is no indication that this was the concern of the teacher. There is a more likely explanation. Please choose again.
(3) You selected 3. The bento are usually made in the traditional manner, but it is not the breaking of tradition or desecrating of any symbol that upset the teacher but a more fundamental factor arising from the difference between American and bento lunches. Please choose again.
(4) You selected 4. This is the best choice. Conformity is a dominant characteristic of Japanese society and the teacher possibly feared that such individuality could set a bad example or lead to teasing or ostracism of the boy.

Many cultures stress strict conformance to group or societal norms as essential for the smooth functioning of the society. The socialization of children in such cultures is highly controlled and any deviance from norms, values, or appearance is severely criticized and may lead to ostracism if continued. While sojourners may be viewed much more leniently (and accepted despite their difference), in situations where the hosts feel actions may adversely influence the group behavior (such as encouraging difference in children as in this example), they will probably attempt to isolate, change, or criticize sojourner behavior so as to reduce its influence. Sojourners should be sensitive to such issues and not unduly contradict local norms merely for the sake of asserting their own individuality. (Brislin et al. 1986, 65-66)

After the second five minute period of discussion in triads, the instructor reviewed and summarized the issue and the incident for a final five minute period. Multiple elaborations have been found to increase retention of new learning (O'Donnell, Dansereau, Rocklin, Hythecker, Lambiotte, Larson, & Young, 1985), so these were provided by the instructor or solicited from the group. Although "A Packed Lunch" contains elements unique to Japanese and American culture (e.g., cultural food preferences) the fundamental reason for the misunderstanding is not unique to Japan and the U. S. Many Asian, African, and South American cultures can be described as collectivistic and intercultural misunderstanding can be expected when members of more individualistic cultures (e.g., the U. S., Australia, Canada) assert their highly individualistic values. This issue, therefore, is correctly described as a culture-general issue with applicability beyond interactions among the Japanese and Americans rather than a culture-specific issue with more limited applicability.

Instrumentation

Participants were asked to write and analyze personal critical incidents before and after training. Two raters coded all of these without knowledge of the writer or pre/post-training status of the incident. The instructions for writing and criteria for scoring personal critical incidents are shown in Appendices A and B.

A total of 10 of the 18 issues were explicitly addressed through one or more of 12 critical incidents (of the 100 incidents available in Brislin et al., 1986). Table 2 lists the culture-general issues and associated critical incidents that were covered each session. These incidents were selected for their applicability to educational settings, were printed on 5 X 8 inch cards, and incidents were in separate envelopes from the answers.

INSERT TABLE 2 ABOUT HERE

Each posttest battery contained fifteen new critical incidents. Thirty incidents were selected for their difficulty and their match to issues taught during training. As much as possible, two incidents were chosen for each issue taught during training. One was randomly assigned to the first posttest, and the remaining one went to the second posttest. Difficult incidents were chosen to prevent a ceiling effect and increase the discriminability of the posttest. Because students could have read more critical incidents (the published book of 100 incidents by Brislin et al. was available on a reference shelf of adjunct course readings and answers for posttest critical incidents were distributed after each posttest), the posttests also tested a few issues not explicitly taught during training but what might have been learned had some of the remaining 88 incidents been studied voluntarily. Posttest issues and their corresponding incidents are shown in Table 3.

Students were asked to select the best response for each posttest incident and write an analyses describing the underlying issues. A separate score was assigned for each task. Scoring criteria were those specified by Brislin et al. (1986) and it was possible to earn partial credit. Each posttest battery also contained an identical 7-item task requiring students to match an intercultural term to its definition (differentiation, role, category/concept, causal attributions, collectivism, individualism, prejudice, and cognitive style were the presented words to be matched to one of seven definitions). The final part of each posttest contained the same four Likert scales assessing students attitude toward the training itself.

In conjunction with the first posttest, all students also completed the Inventory of Cross-Cultural Sensitivity (ICCS). This 34-item inventory contains five subscales; cultural integration (C), behavioral response (B), intellectual interaction (I), attitude toward others (A), and empathy (E). It was developed using a group of individuals with extensive intercultural experience and a group with very little intercultural experience

(Cushner, 1987). Ten items from the Marlowe-Crowne Social-Desirability Scale were added to the ICCS to ascertain whether a socially desirable response patterns was contaminating the data (Crowne & Marlowe, 1964).

INSERT TABLE 3 ABOUT HERE

RESULTS

All narrative data obtained from both posttests and from pre- and post-training personal critical incidents were coded blind by two judges, including the researcher, using a specified coding system (Appendix B). Reliability coefficients of $\underline{r}$=.92, $\underline{r}$=.88, and $\underline{r}$=.84, were obtained between coders for the first posttest, the second posttest, and personal critical incident data, respectively.

Results of the performance of both groups on posttest measures are shown in Table 4. Strong treatment effects were seen in various measures of intercultural sophistication. The total mean score of the first posttest was significantly higher for members of Group A [$\underline{t}(1,87)=4.11$, $\underline{p}<.001$]. They were able to choose significantly more correct answers on the multiple choice section of posttest critical incidents than were members of Group B [$\underline{t}(1,87)=2.69$, $\underline{p}<.01$]. The difference in the analysis section was highly significant; they demonstrated greater accuracy in identifying the issues involved in the incidents [$\underline{t}(1,87)=3.95$, $\underline{p}<.001$]. There were no differences between groups in the number of correct matches of intercultural terms to definitions (e.g., terms like prejudice, individualism, cognitive style) or in Inventory of Cross-Cultural Sensitivity scores, both very likely due to a ceiling effect, which will be discussed later. The trained group reported in the moderately high range that it would be likely that they would use cooperative learning in their classrooms when they teach. They reported perceived increases in their ability to better deal with culture-related problems in the classroom, liked the peer-interactive approach, and received personal benefit from the training. The correlation between these responses and a socially desirable response pattern was not significant, increasing the reliability of participant responses when they said they enjoyed and profited from the training.

INSERT TABLE 4 ABOUT HERE

Six weeks after Group A was trained, Group B was trained. Members of Group B followed the same procedure and studied the same 12 incidents as did the previous group. Two weeks later, the second posttest battery (P2) was administered to both groups to test replicability of treatment effects and, for Group A, duration of treatment effects. These results are also shown in Table 4. There was no difference in the number of incidents classified correctly or in the number of correct matches of terms

to definitions but the total posttest score was nonetheless significantly higher for Group B [$t(1,89)=3.54$, $p<.01$]. As can be seen from the data, Group B's higher posttest total score was a function of a significantly higher score for only one posttest task, provision of written analyses of the issues underlying the incidents [$t(1,89)=3.98$, $p,.001$]. As Group A after treatment, this group also reported in the moderately high range that they perceived increases in their ability to better deal with culture-related problems in the classroom, liked the peer-interactive approach, and received personal benefit from the training. Again, the correlation between these responses and a socially desirable response pattern was not significant.

Post-training personal critical incident scores were significantly higher for both groups, accounting for 8% of the variance [$t(1,179)=4.06$, $p<.001$]. Four of seven items that make up the total score (indices of sophistication of analyses) were also significantly higher (Table 5).

INSERT TABLE 5 ABOUT HERE

Two individuals who had lived abroad and who had extensive intercultural interaction both happened to end up in Group B. Their presence in Group B could have inflated Group B scores, but pre-training personal critical incident scores indicated that this was not the case. The groups were initially the same in ability to generate and analyze personal intercultural conflicts. There were also no difference in post-training scores, although members of Group A used significantly more intercultural terms (i.e., the 18 themes introduced in training) at the completion of their training than did members of Group B after their training [$t(1,89)=2.23$, $p<.05$]. The significance of these findings will be discussed later, although cross-group comparisons should be interpreted in light of the fact that post-training personal critical incidents were not collected from both groups at the same time, but at the completion of their respective treatments.

DISCUSSION

The data support significantly higher cognitive problem-solving ability as a function of training. Total scores for the first posttest and two of its parts, multiple choice scores and scores for students' analysis of the issues involved in the incidents, were significantly higher for members of Group A than they were for members of the control group. Successful analysis of the critical incident was the most demanding task on the posttest. It required ability to recall information taught, relate it to the problem presented in the critical incident, and articulate an analysis in terms acceptable to others (the coders) who later scored the answers. The difference in performance on this task was highly significant.

That there was no difference between groups in identification of correct definitions of intercultural terms appears to reflect a ceiling effect. Assessment instruments need to be refined enough to dimensionalize the type of learning experienced by participants, and this was clearly inadequate for the task in the present study. It was too easy for these upperdivision and graduate level university students to identify the definitions of the presented terms (e.g., familiar words such as prejudice, roles, and individualism). Everyone was able to do this satisfactorily without intercultural training of any type.

Another issue involving intercultural sophistication prior to training seems to account for the lack of significant differences on the Inventory of Cross-Cultural Sensitivity (ICCS). An increase in intercultural sensitivity was hypothesized, but the ICCS did not reflect any treatment effect. When Broaddus (1986) used the ICCS to examine treatment effects, he only found differences between groups on one of five factors, the Empathy factor. Cushner (1987) did not find any differences in ICCS scores between treatment and control groups, as in the study reported here, and he pointed out then that although the inventory can successfully discriminate between groups positioned more distantly from each other along a continuum of intercultural sophistication (e.g., from totally inexperienced to highly sophisticated), it is not sufficiently sensitive to detect small differences in cross-cultural sensitivity. There is a pressing need for sensitive and reliable measures of intercultural sensitivity to differentiate among people who have moderate amounts of intercultural experience. Such a measure would be of great value for the evaluation of intercultural training programs, as trainers are often trying to document changes that are relatively small. The recently developed Cross-Cultural Sensitivity Inventory (Bhawuk, 1989) may be a more appropriate scale to measure such differences.

The duration of treatment effects were tested after an eight-week interval. They do not appear to remain constant. The ability of members of Group A to make a correct choice on the multiple choice task remained high, but their scores for analyzing the issues involved in the critical incident were significantly lower than those of Group B. Part of the "recidivism" may be an artifact of the research methodology. In order to ensure high inter-rater reliability, coders rated responses according to an explicitly defined coding system based on the 18 themes as specified by Brislin et al. (1986). These are presented in Appendix B. As such, coders were discouraged from reading meaning into an answer. Since eight weeks had passed since members of Group A had been trained, it would not be surprising if some of the specific vocabulary and terms taught during training were not readily recalled and therefore accessible during testing. Although specific terms may have been forgotten, however, problem solving ability gains, as measured by the multiple choice task, remained constant. It may be that the high inter-rater reliability was obtained at the expense of a systematic bias against responses that used general terms, words, and personally-relevant analyses not specified in the scoring criteria.

Group A's post-training personal critical incidents contained significantly more intercultural terms than did their pre-training incidents. This is noteworthy because it provides clues about the nature of retention of treatment effects. It indicates that immediately following training they knew and could use the correct intercultural terms. That they performed as well as members of Group B on the multiple choice but poorer on the analysis section of the second posttest suggests then, that the eight week period between their training and P2 decreased their ability to articulate their analyses using the specific terminology of the training, but not their ability to problem solve in general.

As for personal critical incident data, post-training incidents were significantly more sophisticated for members of both groups (Table 5). As mentioned earlier, cross-group comparisons should be interpreted in light of the fact that post-training personal critical incidents were not collected from both groups at the same time. They were obtained at the same stage, i.e., at the completion of their respective treatments. There were a number of reasons for not collecting these data from the control group at the end of Group A's training. This was a field study in the context of an existing curriculum and not pure experimental research. It occurred in the context of an already existing class with its own specified learning objectives. That the training was pertinent to educational psychology can easily be defended but other topics were also a part of the prescribed curriculum. It would not have been ethical to take more time from it, or to demand more time for data collection than already requested of students, simply for another "nail in the coffin".

In addition to curricular and time considerations, it would also have been artificial to solicit these data from the control group when they were engaged in unrelated instructional activities with the other instructor. Had they been requested to write personal critical incident abruptly at the end of their third session with the other instructor, comparisons between groups would have been questionable in any case. There probably always will be tension between achieving watertight experimental designs and the real life constraints experienced by researchers, including researcher-teachers teaching their own classes, that is imposed by ethical considerations for the participants and the institution.

Other possible explanations for the results reported here include trainer effects (e.g., the enthusiasm and attention of the trainer) and practice effects, i.e., what participants really learned was how to select the correct answer when presented with four or five possible options, phrased in terms of the assimilator technique. There is some evidence that this is not the case. The control group received an equal amount of attention and instruction from the other instructor, diminishing the likelihood of a Hawthorne effect. As for what was learned, in addition to selecting correct answers, students successfully provided their own explanations for the intercultural conflict they read about, as well as for their own past personal experiences.

If intercultural training is "effective" but not perceived as a positive or valuable experience, questions about the value

of that type of training are appropriate. It is desirable that training is effective and interesting, if not enjoyable. In this study, training was reported as interesting and enjoyable, and participants reported that they felt better prepared to deal with problems that involve cultural conflict in school settings. They also said that it was likely that as teachers they would use cooperative learning techniques with their future students. As noted earlier, these data do not seem to be contaminated by a socially desirable response pattern.

Students' interest is further indicated by their report that they voluntarily read an average of seven additional critical incidents on their own (the complete book of incidents was available throughout the semester and the answers to the posttests were distributed after training). The material, then, appears to have been intrinsically interesting to students. Attendance was voluntary, and was high for both groups. Attendance was 98% for Group A and 86% for Group B. Although appreciably high, Group B's attendance was significantly lower [$\underline{x2}$ (1, $\underline{N}$=91)=12.18, $\underline{p}$<.001], but not unexpected given that their training was during the final week of instruction for the semester. With final examinations scheduled the following week and no credit given for participating in the training, some students apparently chose to use the class time to finish other projects or begin to study for final exams. The high attendance rate overall, however, is another indication that students really did enjoy the training.

Recommendations for Future Research

The inference that problem-solving ability in the cognitive domain will be translate into problem-solving in a social and behavioral context cannot be made. Participants in the present study demonstrated proficiency in intercultural problem-solving by choosing correct answers and writing correct analyses of critical incidents, and not through actual interpersonal interaction. Other studies would have to be conducted to investigate the degree to which this type of cognitive problem-solving results in more effective behaviors during intercultural interactions. The development and use of behavioral measures of training effect are recommended.

It is clear from this study that cooperative learning activities combined with the culture-general assimilator technique can provide a powerful learning experience, but their independent effects are not known. Studies which would compare a group using the approach described here to a group using the assimilator technique through self-study, or some other method could elucidate some of these relationships.

The fact that the participants were ethnically diverse and motivated because it was likely that they would be teaching in multicultural classrooms if they remained in Hawaii influenced the decision to include the elaboration task as one of the learning activities in the triads. This type of elaboration is partly dependent on people having prior intercultural experience. When working with a less ethnically diverse population it may be necessary to provide substitutes for personal experience in the

early stages of training. Suggestions include very easy critical incidents that have elements all can identify with such as being disappointed when one's expectations are not met; role plays; videotapes of intercultural interaction; or an experiential field activity. Even a simple activity such as a visit to an ethnic restaurant or artistic performance can be a novel intercultural experience for some. Studies investigating interactive effects between prior intercultural knowledge and experiences and the degree of benefit derived from a training program like the one described here are also recommended. It may very well be that as with content-specific knowledge in some other areas, the more one knows, the easier and faster it is to learn more. Regression analyses of measures of prior knowledge and post-training performance, for example, may reveal such interactions.

Another issue is that of the generalizability of training. Even though some incidents were explicitly relevant to educational settings, the critical incidents that were used were not specifically designed for teachers. It could therefore be argued that the knowledge and problem-solving skills that these students learned are not generalizable to the broad spectrum of school-based intercultural situations. This argument might be supported by the fact that significantly more education-related incidents were not described in post-training personal critical incidents (item 2 in Table 5). Obviously part of the problem here is that already before training virtually all of these students (98%) were able to recall and write about a culturally-related critical incident involving education. Training did not increase their ability to recall a single incident because they could already do it before training. The data also show increases in the length and overall sophistication of analyses of their own experiences (items 3, 4, 6, and 7 in Table 5).

This does not answer the question about generalizability definitively, and the argument should not be swept under the rug because it is the crux of culture-general versus culture-specific training. As discussed earlier, culture-general training is explicitly designed to be applicable to a number of cultural interactions occurring in a variety of settings (work, school, family, etc). Consequently, the primary criteria for choosing such critical incidents is that they illustrate issues common to a number of cultures and not those only unique to one or two. One goal of psychology is to seek to understand organizing principles that explain human behavior. This is certainly true of culture-general training. This is not to suggest that there are not unique features about intercultural interaction in schools, and studies which would map areas of intercultural conflict in educational settings and the development of training materials that are specifically designed for teachers are recommended. Such materials would, as the elaboration task during group work, provide additional anchors and contexts for better understanding the types of intercultural interactions that take place.

Conclusion

In summary, combining the culture-general assimilator approach with the structured cooperative learning activities described in this study was found to be a very effective intercultural training approach. As a function of training, participants demonstrated greater intercultural problem solving ability as demonstrated by solving new problems, providing explanations for underlying issues in intercultural conflict, and analyzing personal experiences. These findings were successfully replicated. Retention of ability to problem solve, and to a lesser degree, ability to analyze new problems using terms and concepts taught during training was also demonstrated. Moreover, participants reported that they benefited from and enjoyed the training. Combined with the other two evaluations of the culture-general assimilator approach (Broaddus, 1986; Cushner, 1989), a strong argument is made for the value of culture-general intercultural training.

REFERENCES

Allport, G. (1954). The nature of prejudice. New York: Doubleday.

Amir, Y. (1969). Contact hypothesis in ethnic relations. Psychological Bulletin, 71, 319-342.

Aronson, E. (1978). The jigsaw classroom. Beverly Hills: Sage Publications.

Aronson, E. & Osherow, N. (1980). Cooperation, prosocial behavior, and academic performance: Experiments in the desegregated classroom. In L. Bickman (Ed.)., Applied Social Psychology Annual, Vol. 1. Beverly Hills: Sage.

Bhawuk, D. P. S. (1989). Measurement of cross-cultural sensitivity developed by living abroad. Unpublished masters thesis, University of Hawai'i, Honolulu.

Brislin, R.W. (1986). A culture-general assimilator: Preparation for various types of sojourns. International Journal of Intercultural Relations, 10, 215-234.

Brislin, R. W., Cushner, K., Cherrie, C., & Yong, M. (1986). Intercultural interactions: A practical guide. Newbury Park: Sage.

Broaddus, D. L. (1986). Use of the culture-general assimilator in intercultural training. Unpublished doctoral dissertation, Indiana State University, Terre Haute.

Crowne, D. & Marlowe, D. (1964). The approval motive. New York: Wiley.

Cushner. K. H. (1987). The use of a culture-general assimilator in intercultural training. Unpublished doctoral dissertation, University of Hawai'i, Honolulu.

Cushner. K. H. (1989). Assessing the impact of a culture-general assimilator. International Journal of Intercultural Relations, 13, 125-146.

Cushner. K. & Brislin, R. (1986). Bridging gaps: Cross-cultural training in teacher education. Journal of Teacher Education, 34(6), 51-54.

Dansereau, D. F. (1984, October). Cooperative learning strategies (rev. 1985). A paper presented at the Conference on Study and Learning Strategies, Texas A & M University.

Dansereau, D. F. (1987) Transfer from cooperative to individual studying. Journal of Reading, 29, 614-619.

Fiedler, F. E., Mitchell, T., & Triandis, H. C. (1971). The culture assimilator: An approach to cross-cultural training. Journal of Applied Psychology, 55, 95-102.

Gosnell, P. W. (1983). University incidents: A workbook in cross-cultural communication. Puerto Rico: University of Puerto Rico-Rio Piedras, Dept. of Military Science, pp. 38-42.

Ilola, L. M. (1989). Intercultural interaction training for preservice teachers using the culture-general assimilator with a peer interactive approach. Unpublished doctoral dissertation, University of Hawai'i, Honolulu.

Johnson, D. W. (1981). Student-student interaction: The neglected variable in education. Educational Researcher, 10, 5-10.

Johnson, R. T., Johnson, D. W., & Stanne, M. B. (1986). Comparison of computer-assisted cooperative, competitive, and individualistic learning. American Educational Research Journal 23(3), 382-392.

Juffer, K. A. (1982). Technical description of CSAI, I. Unpublished manuscript, Western Illincis University.

Lew, M., Mesch, D., Johnson, D. W., & Johnson, R. (1986). Positive interdependence, academic and collaborative-skills group contingencies, and isolated students. American Educational Research Journal, 23, 476-488.

O'Donnell, A. M., Dansereau, D. F., Rocklin, T. R., Hythecker, V. I., Lambiotte, J. G., Larson, C. O., & Young, M. D. (1985). Effects of elaboration frequency on cooperative learning. Journal of Educational Psychology, 77, 572-580.

Schwarzwald, J. & Amir, Y. (1988, August). Long-term effects of school desegregation. Paper presented at the Ninth International Congress of the International Association for Cross-Cultural Psychology, Newcastle, Australia.

Shackar, H., & Sharan, S. (1988, August). Cooperative learning effects on social and verbal interactions of pupils in multi-ethnic junior-high-school in Israel. Paper presented at the Ninth International Congress of the International Association for Cross-Cultural Psychology, Newcastle, Australia.

Sharan. S. (1980). Cooperative learning in small groups: Recent methods and effects on achievement, attitudes, and ethnic relations. Review of Educational Research, 50(2), 241-271.

Slavin, R. E. (1980). Cooperative learning in small groups: Recent methods and effects on achievement, attitudes, and ethnic relations. Review of Educational Research, 50(2), 241-271.

Slavin, R. E. (1985). An introduction to cooperative learning research. In R. E. Slavin, S. Sharan, S. Kagan., Hertz-Lazarowitz, C. Webb., & Schmuck (Eds.), Learning to cooperative, cooperation to learn (pp. 5-15). New York: Plenum.

Triandis, H. C. (1972). The analysis of subjective culture. New York: Wiley.

Triandis, H. C. (1977). Theoretical framework for evaluation of cross-cultural training effectiveness. International Journal of Intercultural Relations, 1, 19-45.

Triandis, H. C., Vassiliou, V., Vassiliou, G., Tanaka, Y., & Shanmugam, A. V. (Eds.). (1972). The analysis of subjective culture. New York: Wiley.

Table 1. Study design.

Session number in a 30- session, 15 week course												
6		9			11, 13, 14		15		25, 27, 28			29
Pretest (PCI1)	Group	n	Assign-ment to Groups		Training	(PCI2)	Obser-vation (P1,ICCS,SD)			Training		Obser-vation (P2)
O1	A	43	random		X	O2	O3					O5
O1	B	48	random				O3			X	O4	O5

Note: O=observation; X=exposure to treatment. All dependent variables were measured during each measurement episode as shown. PCI1=pretraining personal critical incidents; PCI2=post-training personal critical incidents; P1=first posttest battery; ICCS=Inventory of Cross-Cultural Sensitivity; SD=social desirability scale; P2=second posttest battery.

Table 2. Culture-general issues presented in training and their associated critical incidents*.

Culture-General Issues	Incident Numbers	Session
Anxiety and related emotional states	39	2
Belonging	37	2
Ambiguity	91**	3
Prejudice and ethnocentrism	41	1
Roles	83***	3
The importance of the group and the importance of the individual	2	1
Hierarchies among people: class and status	90	2
Differentiation	94	2
	55	3
Ingroup-outgroup	84	3
Learning styles	88	1
	82	2

*As identified and enumerated in Brislin et al., 1986, p. 52.
**Not listed in table on p. 52 but identified as such on p. 215.
***Not listed in table on p. 52 but identified as such on p. 91.

Table 3. Culture-general issues tested in posttests and their associated critical incidents*.

Culture-General Issues	Incident Numbers	Posttest
Anxiety and related emotional states	71	1
	53	1
	73	2
Emotional experience and disconfirmed expectancies (+)	86	1
Belonging		
Ambiguity	95	1
	96	2
Prejudice and ethnocentrism	52	2
Work (+)	93	2
Roles	26	1
	61	1
	24***	2
	80	2
	93^	2
	72^^	2
	30	2
Values: The integrating force in culture (+)	18**	1
	77	2
The importance of the group and the importance of the individual	78	1
	97	1
	100	1
	6	2
	36	2
	7	2
Hierarchies among people: class and status	47	1
Categorization (+)	51	1
Differentiation	25	1
	13	1
	24***	2
	74	2
Ingroup-outgroup		
Learning styles	87	1
	X	2

(+) Not explicitly taught during training but tested for.
*As identified and enumerated in Brislin et al., 1986, p. 52.
**Not listed in table on p. 52 but implied on p. 104.
***Not listed in table on p. 52 but implied on p. 108, double-coded under differentiation and roles.
^Not listed in table on p. 52 but implied on p. 223.
^^Not listed in table on p. 52 but identified as such on p. 223.
X=Adapted from Gosnell (1983).

Table 4. Total and subscale means, standard deviations, and t-values of the first and second posttests and their subscales by group membership.

Variable	Grp A $\bar{x}$	SD	Grp B $\bar{x}$	SD	df	t	p
P1 total	39.84	7.19	33.12	8.10	87	4.11	<.001
MC	22.98	3.95	20.75	3.85	87	2.69	<.01
AI	11.96	5.12	7.43	5.63	87	3.95	<.001
MTD	4.90	1.20	4.94	1.12	87	0.14	n.s.
P2 total	33.15	5.53	38.00	7.31	89	3.54	<.01
MC	20.67	3.05	21.04	3.77	89	0.51	n.s.
AI	7.66	5.09	12.08	5.46	89	3.98	<.001
MTD	4.81	1.47	4.88	1.50	89	0.20	n.s.

Note: MC=multiple choice task; AI=analysis of issues task; MTD=matching-terms-to-definitions task; Total=sum of MC, AI, and MTD.

Table 5. Means, standard deviations, and t-values of grouped pretest personal critical incidents (PCI1) by post-training personal critical incidents (PCI2) scores.

Variable	PCI1 $\bar{x}$	SD	PCI2 $\bar{x}$	SD	df	t	p
Total	6.74	2.54	6.92	2.32	178	4.35	<.001
Item 1	.82	.38	.90	.28	178	1.62	.11
Item 2	.98	.15	.93	.24	178	1.46	n.s.
Item 3	.43	.43	.67	.41	178	3.81	<.001
Item 4	.11	.26	.23	.37	178	2.38	<.05
Item 5	.76	.41	.78	.38	178	0.28	n.s.
Item 6	3.03	1.09	3.65	1.41	178	3.33	<.01
Item 7	.71	.86	1.19	.90	178	3.66	<.001

Description of total and item scores are shown in Appendix B.

APPENDIX A

Instructions for the Writing of Personal Critical Incidents

The following instructions were read twice when both pre-training and post-training personal critical incidents were solicited. Students were given 10 minutes and two lined but otherwise blank 5 X 8 inch index cards on which to write their incidents. When all incidents were written and collected (pre- and post-training incidents from both groups), they were entered into a word processor. Coders did not know who wrote each incident or whether it was written before or after training.

Personal Critical Incident Script

Based on your definition of culture, think of an incident in your school life that involved a difficulty that was culturally based. This incident should have taken place in an educational setting. It may be something that happened a long time ago, or something that happened today. It may be an incident in which you felt misunderstood or disinvited, or you may have observed this difficulty situation take place between other people.

Try to visualize that incident with as much detail as possible. How did it start? What do the people involved in this difficult incident look like? What are they saying? How do you feel? I will repeat what I just said. (Reread script).

Please write your analysis of the incident. What was going on and why did it happen? You have 10 minutes to write your analysis so please be as detailed as possible. If you need more paper, just raise your hand.

APPENDIX B

Coding Criteria for Scoring Personal Critical Incidents

Item 1 Difficulty involving CULTURE described (i.e., not individual characteristics such as abrasiveness);
No = 0, Yes = 1.

Item 2 Difficulty took place in an educational setting;
No = 0, Yes = 1.

Item 3 Explanation for problem offered;
No = 0, Yes = 1.

Item 4 One of the following 18 themes mentioned in explanation;
No = 0, Yes = 1

The 18 themes are (Brislin et al., 1986, pp. 39-42):

(A) People's intense feelings:
- Anxiety.*
- Disconfirmed expectancies.*
- Belonging.*
- Ambiguity.*
- Confrontation with one's prejudices.*

(B) Knowledge areas:
- Work.
- Time and space.
- Language.
- Roles.*
- Importance of the group and the importance of the individual.*
- Rituals and superstitions.
- Hierarchies: class and status.*
- Values.*

(C) Bases of cultural differences:
- Categorization.*
- Differentiation.*
- Ingroup-outgroup distinction.*
- Learning styles.*
- Attribution.*

*These issues were discussed during training. Those without an asterisk were available in the Brislin et al. (1986) book to which students had access.

Item 5 Culture-related terms correct (e.g., ethnic group labels);
No = 0, Yes = 1, Missing = 2.

Item 6 Code overall length of critical incident using ruler card (divided in increments of 50 words). Do not include blank lines between paragraphs in coding of length.

Item 7 Code overall sophistication of critical incident;
Unsophisticated, simple = 0
Made an attempt to explain incident = 1
Sophisticated, issue clearly explained = 2
Very sophisticated, multi-level explanation = 3.